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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Laszlo Szarvas

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EXAMINER

SHIAO, REI TSANG

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,912	Applicant(s) SZARVAS ET AL.	
	Examiner REI-TSANG SHIAO	Art Unit 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/16/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This application claims benefit of the foreign application:
GERMANY 10359434.5 with a filing date 12/17/2003.
2. Claims 1-18 are pending in the application.

Information Disclosure Statement

3. Applicant's Information Disclosure Statement filed on August 16, 2006 has been considered. Please refer to Applicant's copy of the 1449 submitted herein.

Responses to Election/Restriction

4. Applicant's election with traverse of election of Group I claims 1-18, in part, in the reply filed on July 01, 2008 is acknowledged. The traversal is on the grounds that applicants submit that this is a conclusory statement not supported by the evidence (i.e., US 5,689,022) put forth in the Office Action. Since the Office has failed to articulate a reason for its conclusion, applicants submit that the lack of unity requirement is improper. This is found not persuasive, and the reasons are given *infra*.

Claims 1-18 are pending in the application. The scope of the invention of the elected subject matter is as follows.

Claims 1-18, in part, drawn to processes of making compounds of formula (I), wherein the stating materials of trialkyl-, trialkenyl- or triarylphosphine represents compound of formula (II) thereof, and the stating materials of monounsaturated or polyunsaturated electrophile represents compounds of formula (III) or (IV) thereof, their method of use.

The claims 1-18 herein lack unity of invention under PCT rule 13.1 and 13.2 since the compounds defined in the claims lack a significant structural element qualifying as the special technical feature that defines a contribution over the prior art, see Paust et al. US 5,689,022. Paust et al. disclose similar quaternary phosphonium salt compounds of formula (II), see column 2. Accordingly, unity of invention is considered to be lacking and restriction of the invention in accordance with the rules of unity of invention is considered to be proper. Furthermore, even if unity of invention under 37 CFR 1.475(a) is not lacking, which it is lacking, under 37 CFR 1.475(b) a national stage application containing claims to different categories of invention will be considered to have unity of invention if the claims are drawn only to one of the following combinations:

- (1) A product and a process specially adapted for the manufacture of said product', or
- (2) A product and a process of use of said product; or
- (3) A product, a process specially adapted for the manufacture of the said product, and a use of the said product; or
- (4) A process and an apparatus or means specifically designed for carrying out the said process; or
- (5) A product, a process specially adapted for the manufacture of the said product, and an apparatus or means specifically designed for carrying out the said process.

And, according to 37 CFR 1.475(c)

if an application contains claims to more or less than one of the combinations of categories of invention set forth in paragraph (b), unity of invention might not be present.

However, it is noted that unity of invention is considered lacking under 37 CFR 1.475(a) and (b). Therefore, since the claims are drawn to more than a product, and according to 37 CFR 1.475 (e)

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the determination whether a group of inventions is so linked as to form a single general inventive concept shall be made without regard to whether the inventions are claimed in separate claims or as alternatives within a single claim.

The claims lack unity of invention and should be limited to only a product, or a process for the preparation, or a use of the said product. In the instant case, Groups I-II are drawn to various products, processes of making, and the final products do not contain a common technical feature or structure, and do not define a contribution over the prior art, i.e., similar quaternary phosphonium salt compounds. Moreover, the examiner must perform a commercial database search on the subject matter of each group in addition to a paper search, which is quite burdensome to the examiner.

Claims 1-18, in part, embraced in above elected subject matter, are prosecuted in the case. Claims 1-18, in part, not embraced in above elected subject matter, are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention.

The requirement is still deemed proper.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1-18 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the instant processes of making quaternary

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phosphonium salt compounds of formula (I) using the starting materials of trialkyl-, trialkenyl- or triarylphosphine representing compound of formula (II) thereof, and the starting materials of monounsaturated or polyunsaturated electrophile representing compounds of formula (III) or (IV) thereof, does not reasonably provide enablement for the instant processes of making quaternary phosphonium salt compounds without limitation (i.e., no formula), and the starting materials trialkyl-, trialkenyl- or triarylphosphine representing compounds and monounsaturated or polyunsaturated electrophile are not limited (i.e., no formula), see claim 1. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

In *In re Wands*, 8 USPQ2d 1400 (1988), factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. 112, first paragraph, have been described. They are:

1. the nature of the invention,
2. the state of the prior art,
3. the predictability or lack thereof in the art,
4. the amount of direction or guidance present,
5. the presence or absence of working examples,
6. the breadth of the claims,
7. the quantity of experimentation needed, and
8. the level of the skill in the art.

In the instant case:

The nature of the invention

The nature of the invention is processes of making quaternary phosphonium salt compounds without limitation of the final products and the starting materials (i.e., no formula), see claim 1.

The state of the prior art and the predictability or lack thereof in the art

The state of the prior art is that a similar product, Paust et al. US 5,689,022 disclose similar quaternary phosphonium salt compounds of formula (II), see column 2.

The amount of direction or guidance present and the presence or absence of working examples

The only direction or guidance present in the instant specification is the exemplified processes on pages 11-12 of the specification. There is no data present in the instant specification for the final products quaternary phosphonium salt compounds and starting materials, which are not limited.

The breadth of the claims

The instant breadth of the rejected claims is broader than the disclosure, specifically, the instant claims include any quaternary phosphonium salt compounds without limitation.

The quantity or experimentation needed and the level of skill in the art

While the level of the skill in the chemical arts is high, it would require

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undue experimentation of one of ordinary skill in the art to resolve any quaternary phosphonium salt compounds, trialkyl-, trialkenyl- or triarylphosphine representing compound, and monounsaturated or polyunsaturated electrophile which are not limited. There is no guidance or working examples present for constitutional any quaternary phosphonium salt compounds without limitation. Incorporation of the limitation of quaternary phosphonium salt compounds (i.e., formula (I)), the stating materials of trialkyl-, trialkenyl- or triarylphosphine representing compound (i.e., formula (II)), and the stating materials of monounsaturated or polyunsaturated electrophile (i.e., formula (III) or (IV)) into claim 1 would overcome this rejection.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 provides for the use of quaternary phosphonium salt compounds but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced. Moreover, Claim 14 recites the limitation "formula I" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by (1)Taira et al. CAS: 138:255045; (2) Yamano et al. CAS: 136:6169; (3) Didemnum et al. CAS: 121:175536; (4)Ito et al. CAS: 110:231910; (5) Sliwka et al. CAS: 109:55001; or (6) Bestmann et al. CAS: 105:60777.

Applicants claim processes of making quaternary phosphonium salt compounds (i.e., formula (I)) using the starting materials of trialkyl-, trialkenyl- or triarylphosphine compounds (i.e., formula (II)), and the starting materials of monounsaturated or polyunsaturated electrophile representing compounds (i.e., formula (III) or (IV)) in the presence of acid or a solvent, see claim 1.

7.1 Taira et al. disclose nine different processes of making quaternary phosphonium salt compounds, see RX(47)-(51), RX59-(60), and RX (63)-(64). They clearly anticipate

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the instant processes, wherein the final product is compounds of formula (I), using triarylphosphine and aromatic-aliphatic alcohol of formula (III) or (IV) as starting materials, in the presence of acid (i.e., HBr) and solvent (i.e., EtOH).

7.2 Yamano et al. disclose two different processes of making quaternary phosphonium salt compounds, see RX(51)-(52). They clearly anticipate the instant processes, wherein the final product is compounds of formula (I), using triarylphosphine or trialkylphosphine and aromatic-aliphatic alcohol of formula (III) or (IV) as starting materials, in the presence of acid (i.e., HBr) and solvent (i.e., MeOH).

7.3 Didemnum et al. disclose one process of making quaternary phosphonium salt compounds, see RX(3). They clearly anticipate the instant processes, wherein the final product is compounds of formula (I), using triarylphosphine or trialkylphosphine and aromatic-aliphatic alcohol of formula (III) or (IV) as starting materials, in the presence of acid (i.e., HCl) and solvent (i.e., MeOH).

7.4 Ito et al. disclose one process of making quaternary phosphonium salt compounds, see RX(12). They clearly anticipate the instant processes, wherein the final product is compounds of formula (I), using triarylphosphine or trialkylphosphine and aromatic-aliphatic alcohol of formula (III) or (IV) as starting materials, in the presence of acid (i.e., HBr) and solvent (i.e., MeOH).

7.5 Sliwka et al. disclose two processes of making quaternary phosphonium salt compounds, see RX(3) and RX(6). They clearly anticipate the instant processes, wherein the final product is compounds of formula (I), using triarylphosphine or

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trialkylphosphine and aromatic-aliphatic alcohol of formula (III) or (IV) as starting materials, in the present of acid (i.e., HBr) and solvent (i.e., MeOH).

7.6 Bestmann et al. disclose one process of making quaternary phosphonium salt compounds, see RX(6). They clearly anticipate the instant processes, wherein the final product is compounds of formula (I), using triarylphosphine or trialkylphosphine and aromatic-aliphatic alcohol of formula (III) or (IV) as starting materials, in the present of acid (i.e., HCl) and solvent (i.e., MeOH).

Dependent claims 2-18 are also rejected along with claim 1 under 35 U.S.C. 102(b).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rei-tsang Shiao whose telephone number is (571) 272-0707. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on (571) 272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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/REI-TSANG SHIAO /

Rei-tsang Shiao, Ph.D.
Primary Patent Examiner
Art Unit 1626

September 16, 2008